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This report presents a statement of the Library of Congress's view of its position as the National Library of the United States. The Library has developed from a small parliamentary library to serve the Congress to a library that performs more national-library functions than any national library in the world. Its organizational position in the Legislative Branch has not and need not inhibit its further development as a national library, but legislation to recognize its present "de facto" national-library role would be beneficial, as would a permanent commission on libraries and information to point up national needs and to advocate solutions and funding. Fifteen functions which the Library might expand or undertake, if it were recognized as the "de jure" national library and were supported accordingly, are listed and suggestions regarding necessary action to enable the Library to carry out the expanded services are made. The most important proposals of the last decade for a national "information system" are outlined, and the distinction made in these proposals between libraries and library systems on the one hand and evaluation and retrieval systems on the other is rejected. The Library sees the basic problem in an effective national library and information network as an access problem. The access problem is essentially a file problem, i.e., one of bibliographic control, on which the Library is making inroads through its program to automate its central bibliographic record. (WS)

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THE LIBRARY OF CONGRESS AS THE NATIONAL LIBRARY

POTENTIALITIES FOR SERVICE

A Report to the
National Advisory Commission on Libraries

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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The Library of Congress
Washington, D. C.
October 1967

ABSTRACT

THE LIBRARY OF CONGRESS AS THE NATIONAL LIBRARY

POTENTIALITIES FOR SERVICE

I. National Library and Information Systems

The most important proposals for a national "information system," oriented chiefly toward science and technology, are outlined. Their authors have made a distinction between libraries and library systems on the one hand and evaluation and retrieval systems on the other. The Library of Congress (LC) does not think that there is such a dichotomy. Also it thinks LC's role has been largely ignored or misunderstood. It is LC's contention that LC, the National Library of Medicine (NLM), and the National Agricultural Library (NAL) have already done more than any Federal group to insure that a sizable portion of the world's output of significant literature is acquired, cataloged, and made available to the nation. LC believes that knowledge cannot be neatly divided and pigeonholed by agency. It thinks that the basic problem in an effective national library and information network for the future is an access problem and the access problem is essentially a file problem--or bibliographic control, to which LC is committed. LC's program to automate its central bibliographic record and to develop machine-readable catalog copy (the MARC Pilot Project) is making inroads on this problem. LC thinks that progress toward this end cannot be made through fragmented Federal and private programs, but through cooperative efforts to carry through a well-ordered program to develop a national system. An example of such an effort is the national Serials Data Program, in which LC, NAL, and NLM are cooperating to establish at LC a common data base of bibliographic

information on periodicals, to which the nation would have access. Cooperation, integration, total participation, and commitment are all, LC believes, unfolding realities.

II. The National Library Concept

The historical development of LC, from a small parliamentary library to serve the Congress to a library that performs more national-library functions than any national library in the world, is outlined. The place of LC in the governmental structure, i.e., in the Legislative Branch, is discussed. LC considers that being in the Legislative Branch has not and need not inhibit its further development as a national library. Legislation to recognize its present de facto national-library role, however, would be beneficial, as would a permanent commission on libraries and information to point up national needs and to advocate solutions and funding. Financial support of the national library is the basic imperative, and there should be a budgetary system whereby LC's national-library functions need not be charged to the operation of the Congress itself. Approval and sponsorship of legislation to recognize LC's dual role as "The Library of Congress--the National Library of the United States" by the Joint Committee on the Library and its parent bodies--the Committee on House Administration and the Senate Committee on Rules and Administration--would be necessary.

III. Opportunities for Expanded Services and Activities

As the national library, the Library of Congress would be acting formally, as it does at present informally, in a national setting and on a broader stage. It is understood that LC's function to provide research

assistance to Congress should keep pace with its expanding national-library functions. Some of the functions LC might expand or undertake, if it were recognized as the de jure national library and were supported accordingly, are to serve as (1) the national acquisitions agency; (2) the national center for library resources (a library of record), supplementing the resources of other agencies and institutions, providing guides, such as the National Union Catalog and the National Union Catalog of Manuscript Collections, and providing national leadership for the preservation of library materials; (3) the national cataloging center; (4) a national center for bibliographical services; (5) a national center for research and training in library and information science; (6) the national center for data on serials; (7) a national technical reports center; (8) the national referral service in all fields; (9) the focus of a national interlibrary loan system; (10) a national research and information center; (11) a center for library publishing; (12) a center for photocopying; (13) the administrator of the United States Copyright Law; (14) the administrator of the national library program for the blind and physically handicapped; (15) a national center for cultural activities.

III. Implementation

In order for the Library of Congress to carry out the expanded services outlined, certain steps must be taken:

1. Across-the-board support by the present National Advisory Commission on Libraries and continued support by a permanent commission;

2. Legislation to make the Library of Congress in name (by subtitle), as it is in fact, the National Library of the United States;

3. Widespread support and awareness of the National Library at every level must be achieved. Cooperative arrangements with government agencies, libraries, information centers, etc., must be strengthened. The quality and quantity of professional staff will have to be greatly augmented not only at the Library of Congress but throughout the nation. The National Library will have to be given time and money in order to inaugurate and implement the proposals for expanded service.

The Library of Congress believes that with adequate support, funds, and staff it can provide the leadership expected by library and information scientists in the effort to control and disseminate information in the national interest.

THE LIBRARY OF CONGRESS AS THE NATIONAL LIBRARY

POTENTIALITIES FOR SERVICE

At the conclusion of the meeting of the National Advisory Commission on Libraries at the Library of Congress on May 22, 1967, the Chairman of the Commission requested that the Librarian of Congress give the Commission a statement of the Library's view of itself as the National Library of the United States, summarizing some of the points made to the Commission and looking into the future.

This account is not intended as a review of the state of the art of librarianship. It considers possibilities for the future national library and information service network, but it does not pretend to be a blueprint for action. It is a vision and not necessarily a prediction of the role of the Library of Congress as the National Library.

National Library and Information Systems

During the past 10 or 15 years, the Library of Congress has been acutely aware--as have many others in different spheres of activity--of two great new forces that are bringing about rapid and startling changes in virtually every segment of our national life. The first of these is the vastly expanded role of the Federal Government and Federal policy in science, industry, education, health, welfare, and many other fields. The second is the advance in electronics, which provides new data processing technologies and new methods of handling information.

The implications of these developments for the future of library and information services in all fields of knowledge and endeavor have been of great concern to us. At the same time, we have felt it incumbent upon us, in view of the present broad and far-reaching responsibilities of the

Library of Congress as the de facto National Library of the United States, to move with due regard for the foreseeable consequences of whatever new responsibilities we might undertake or new techniques we might employ.

It may seem to some that we have not moved fast enough. To others it may appear that we have remained aloof when we should have become involved. Be that as it may. We are now moving on as broad a front as available resources and advances in technology permit. The Library of Congress, within the framework of its responsibilities to the Congress, to the library community at large, and to all the many publics that it serves, is not merely willing and ready but it is committed to play an appropriately central role in the planning and operation of the emerging national library and information network.

When we attempt to define the relationship of the Library to the efforts that have been made to develop a plan for the national library and information network, we are confronted with a welter of studies and reports dating back a decade. The impetus for most of them has come from the Federal Government and notably from those elements of the Government concerned with science and technology. It is perhaps instructive to recall some of the principal proposals.

Early in 1958, the Stanford Research Institute produced "A Draft Program for a National Technical Information Center." In 1962, there was the Crawford Report: "Scientific and Technological Communication in the Government." Also in 1962, we had the Cahn Plan: "Bureau of Information

for Technology and Science Proposed as 'Key Station' of Federal 'Network' of Information Services to the U. S. Free Enterprise System." In January 1963, Dr. Alvin Weinberg, of the President's Science Advisory Committee, issued his famous report, "Science, Government, and Information." Later that year, Management Technology, Inc., did a study called, "A National Scientific and Technological Information System." At about the same time, Robert Heller and Associates prepared "A National Plan for Science Abstracting and Indexing Services." In July 1963, Dr. Mortimer Taube, of Documentation, Inc., wrote his "Proposal for the Establishment of a *Government Corporation to Create and Provide Services from an Integrated* Store of Scientific and Technical Information." In November of that year, Dr. J. H. Kelley, of the Office of Science and Technology, addressed to Dr. Jerome Wiesner his "Memorandum" on the subject: "Government Science Package," emphasizing regional decentralization. That same month, G. S. Simpson, Jr., of the Battelle Memorial Institute, proposed "A Pentagon of U. S. Scientific and Technical Information and Data Services." In February 1964, Dr. Stafford Warren addressed to President Kennedy a "Memorandum on a National Library of Science System." The Jonker Plan, "A Model Information Retrieval Network for Government, Science, and Industry," of May 1964, proposed the "Organization of a National Scientific and Technical Information Center"; while in January 1965 the Air Force Office of Aerospace Research issued a proposal entitled "Toward a National Technical Information System."

It should be noted that many of these studies were carried out for, and all were reviewed by, the Office of Science and Technology in the

Executive Office of the President. It was natural, then, that the Office of Science and Technology, through the Committee on Scientific and Technical Information (COSATI), a subordinate group under the Federal Council for Science and Technology, should have commissioned the System Development Corporation, with funding from the National Science Foundation, to undertake a synthetical review of the situation regarding the problem of planning and developing a national library and information system and to recommend one of the several alternatives which seemed to be open.

The result, published in September 1965, was the well-known SDC report entitled "Recommendations for National Document Handling Systems in Science and Technology." The assumptions on which it was based and at least the general thrust of its recommendations have been widely publicized and commented upon. It was certainly the most ambitious of the national-plan documents. As a distillation and rationalization of many past proposals in the troublesome area of scientific and technical information service, it was a very useful report. Although there were in it elements with which to disagree, it served to crystallize the thinking of many individuals and organizations about the basic requirements of national system planning for library and information work. The report was disturbing to the Library of Congress mainly because we felt that both the philosophy by which we live and the role that we play were either largely ignored or misunderstood.

Despite the sponsorship which many of these proposals have enjoyed, few have been characterized by the degree of competence for the task at hand

nor based upon the depth of experience or the breadth of authority that might have been expected for recommendations of such profound and far-reaching effect. There have been, nevertheless, sufficient weight, influence, and funding behind at least some of these thrusts to raise apprehension that one plan or the other might be rushed prematurely into being.

The establishment of the National Advisory Commission on Libraries by the President of the United States was, incidentally, a timely measure for the prevention of such an untoward result. The work of the Commission assures that the many complex problems associated with, as well as the variety of needs for, the creation of a national library and information system will receive mature consideration at every level of the Government and of the private sector where the national interest is engaged.

The fears and frustrations that have brought on this rash of proposed solutions are understandable. Much of this striving arises from an honest concern for the better management of the rapidly proliferating information and information packages of the scientific and technological age. While libraries have been severely taxed by the problems of acquiring, housing, processing, and servicing the flood of new materials in such ways that this accumulation will meet the needs of tomorrow as well as of today, most of the proposed document-handling and so-called information systems have as an underlying objective the reduction, if not of the rising tide itself, then at least of the bulk of the accretions. There is much discussion nowadays of the compaction of information, the reduction of data, by a variety of possible means--physical (microforms, electronic processing, etc.) and intellectual (abstracting, evaluation, analysis, etc.).

There is merit in many of the schemes advanced. When bulky materials can be rendered less bulky, a diminution of the space required for storage is manifest. When cumbersome or time-consuming procedures can be simplified or performed by machines, savings in precious manpower, lead-time, and dollar costs are indicated. If unnecessary duplication and redundancy can be eliminated, efficiency is obviously improved. Where relevance and specificity can be increased, the opportunities for effective utilization are enhanced. Nevertheless, it is too often overlooked that a reduction in the physical bulk of information materials does not achieve a reduction in the number of units which must be handled and controlled in library and information systems.

On the contrary, every surrogate established for an original informational item becomes itself a new, additional informational item and librarians are only too aware of the many surrogates that may be created for each original informational item if merely traditional control techniques (cataloging, classification, indexing, abstracting, etc.) are applied by traditional (manual, visual, etc.) methods. The application of the new technologies to the creation, manipulation, and servicing (e.g., distribution) of bibliographical records will no doubt yield many advantages to Library and information-service work, but a reduction in the number of surrogates, quite apart from the original informational items themselves, will assuredly not be one of them.

That the new technologies, coupled with the new types of information services that the technologies make possible, will in fact bring about an increase in the number of both original and secondary information items seems evident. This prospect, if it is seen at all, does not disturb the proposers of new and supposedly sophisticated information systems.

The basis for many of the newer information service configurations is the desire to help the user by making it possible for him to look into the fewest number of sources and in those few, possibly only one, to find the precise information or data he needs, stated as tersely as the subject permits. It assumes that the researcher neither needs nor wants his information in the document, or the context, or the form in which the original researcher recorded it, but will welcome receiving it condensed by an intermediary, or series of intermediaries, provided the distillation is authenticated by a peer researcher, scientist, or engineer.

To accomplish this purpose, there have been created both within and outside the Federal Government numerous new information centers called "analysis" or "evaluation" centers, and the eventual need for many more in this country and abroad is actively contemplated. The System Development Corporation report mentioned earlier, which discussed the services of these centers at some length, ascribed their rise to "the apparent inability of conventional library systems to service the needs of the user group."

One estimate suggests that 2,000 such centers strategically located around the world could systematically cover all significant existing literature at a possible annual cost of $200 million, or $100,000 each. Another calculates that an individual center could "process" as many as 1,000 articles a year at a unit cost of under $300.

Although a variety of operating patterns is foreseen for these centers, all have in common the concept of repackaging, condensing, and synthesizing the information contained in technical articles, reports, books, and patents in a particular, limited subject area, and of providing rapid--and therefore machine-aided--"tailor-made" service on this information. Various "compression factors" have also been discussed, some estimates running as high as 100 to 1. Yet, at the same time, nearly every "analysis" and "evaluation" center plan provides for making available the full text of the evaluated and compressed information both in printed and in machine-readable form, and for supporting the condensed material by machine-readable bibliographies of the original informational items.

How broad or how limited the user group proposed as the beneficiary of these services might be is not clear. From the general nature of the suggested systems, however, one is led to suppose that unrestricted public service is not considered either desirable or necessary and that dissemination would be to a selected or elite clientele. All the same, the "evaluated and compressed" new literature produced under these systems would become a part of the world literature of science and technology and would therefore fall within the purview of the national, or international, library and information network. This being the case, the new types of information services would leave us with all our present informational packages and their surrogates, together with the problems of controlling and communicating them, and would add several new kinds of packages and surrogates and the burden of handling them.

Here we see clearly illustrated what librarians have long realized: that each form or generation of literature and literature service produces

additional forms or succeeding generations of literature and literature service, and that the accumulation must continue to infinity. For with knowledge and the literature in which its discovery is recorded, there is no death; whatever dies--that is, is superseded or appears to be superseded by new knowledge--remains. The dead, or seeming dead, is intermingled with the living, and no man can tell whether or at what moment it will spring to life again and to new meaning.

It is our position that information, data, learning, knowledge, however acquired or recorded, is a continuum. For the purposes of its management or handling, as well as for its use, information is inseparable from the media in which it is found. We have noted that the ferment for a national, even international, library and information network plan has come from the scientific and technical community. No one denies the importance, even the crucial importance, of scientific and technical information. Science and technology, however, do not, to our thinking, constitute a definable and viable field in which, or for which, a national library and information network can be constructed. Nor do we believe that a truly national library and information network, whether limited to science and technology or extended to embrace all knowledge, can be constructed solely by or solely within the Federal Government. The Federal Government, admittedly, has a huge stake--and in terms of national goals and policies possibly the preponderant stake--in scientific and technical information, both as a producer and user; but it has no monopoly of it and, in the last analysis, no suzerainty over it. And if, as we prefer, one takes a long view of life and culture, science and technology, though they may advance, sustain, and complement, cannot supplant or overbear the other

great branches of learning and activity--education, the law, the arts, the social sciences, and the humanities.

From these considerations we think it follows that the attempt of the writers of proposals for national plans to dichotomize the community of learning or knowledge into "libraries and library systems," on the one hand, and "evaluation and retrieval systems," on the other, must be labelled arbitrary and artificial. We do not think that the facts will support a description of library activities, at whatever level of the community, as "document-oriented." Both types of activity--and the activities themselves are often of a mixed nature--are concerned with documents and information. We would question the wisdom and the economics of attempts to separate them.

A cognate tendency of "new wave" thinking which is disturbing to librarians, and particularly to a universal library like the Library of Congress, is its insistence on the ever-finer fragmentation of the "fragments of knowledge." The parallel tendency is, of course, to design the components of the national library and information system in such a way that the area of responsibility of each component would be delimited to one of the finely fragmented fields. We believe that the ultimate effect of such a system would be to confine the scholar--the scientist, if you will--at the end of an uncomfortably and stultifyingly short tether.

The SDC Report of 1965 gave strong support to the so-called "responsible agency" concept. Since the concept was not fully spelled out, it is difficult to assess its full implication. Inherent in the idea, however, is the dubious assumption that science and technology (or any broad subject area, for that matter) can be subdivided arbitrarily into

meaningful, or at least manageable, compartments--"subsets of the spectrum of science and technology"--which correspond, or can be made to correspond, to the functions or missions of the Executive Branch departments and agencies of the Federal Government.

In more recent planning documents emanating from Federal scientific and technical information sources there is a new and encouraging note that recognizes the desirability of achieving a "harmonious array" among information systems, whether they be in the Government or the private sector and despite their orientation toward specialized missions, or functions, or disciplines. Whether or not harmony could be achieved would depend, we believe, in large measure upon the pattern and the content of the array.

Since every important reference and research library is, by definition and inherent nature, a considerably more comprehensive information center than any of the activities--already in existence or proposed--to which this term is usually applied in the planning documents we have been discussing, the Library of Congress already stands at the focus of a large national information network. We maintain that the network is not something arbitrarily established by Federal fiat but has been developed over a period of many years in response to very real and important cultural and sociological needs. The network is dynamic and organic and cannot be ignored or supplanted in the paper plans for a new network, whether the purview be limited to science and technology or extended to all knowledge.

The basis of the existing network is the vast collections of informational materials which the components of the network collectively hold and on which they offer an impressive variety of services to many kinds of

publics in this country and around the world. Many of the services are general and benefit large numbers of clients; other services are highly specialized, tailor-made to the needs of a few specialists.

One assumption underlying several of the recent proposals for a national system is that the Federal Government has a responsibility to ensure that there exists within the United States at least one accessible copy of every significant publication of the world-wide literature of science and technology. Semantics aside, this is a desideratum that is difficult to quarrel with. At the same time, however, it must be recognized that the library community, with the Library of Congress, the National Library of Medicine, and the National Agricultural Library in the van, has done, and continues to do, more than any other group to assure that a sizeable portion of the world output of significant literature, including an exceedingly high percentage of the scientific and technical literature, is acquired, cataloged, and made available throughout the country. Under Title II-C of the Higher Education Act of 1965, the Library of Congress, as is well known, was given the mandate and, through subsequent legislation, the funds for a far broader acquisitions and cataloging activity in all subject fields—not merely in science and technology--than anything the library community has been capable of in the past, and larger, we believe, than the effort envisioned in the studies set forth by the scientific and technical community.

Leadership by the Federal Government has been another theme running through most of the planning documents. The Library of Congress certainly agrees that the Government must take a leading part in the evolution of the national library and information network for the future. We also feel that

effective and enlightened leadership is best achieved without resort to compulsion. Moreover, we believe that, through many encouraging developments already unfolding, there is evidence that leadership is being provided.

In the library community, for example, through the activities of the American Library Association, the Association of Research Libraries, the regional library associations, the Council on Library Resources, Inc., the interagency Federal Library Committee*, and especially the formalization of closer cooperation among the three national libraries--the Library of Congress, the National Agricultural Library, and the National Library of Medicine--not to mention the work of other groups, there is now taking place an impressive marshalling of resources, brain power, and experience. We are gratified also that the Committee on Scientific and Technical Information (COSATI), in continuing its efforts in national network planning, and more recently the Committee on Scientific and Technical Communication (SATCOM) of the National Academy of Sciences are working not only with the Federal departments but are giving considerable attention and a large active role to the academic community and the professional societies.

The Library of Congress would like to go on record with an opinion which we believe expresses the fundamental requirement for success in

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* In March 1965, a Federal Library Committee was established under the auspices of the Bureau of the Budget and the Library of Congress. Membership includes the Librarian of Congress as Chairman, the directors of the National Agricultural Library and the National Library of Medicine, representatives of the Executive departments of the Government and six representatives of independent agencies, selected on a rotating basis by the permanent members. The Committee gives consideration to the problems and policies of Federal libraries as well as to cooperative undertakings that may be possible.

establishing an effective national library and information network for the future. Quite simply, the basic need is to develop a responsive, flexible, communications medium that will serve as the means for moving the information record throughout the system. Solution of the communications problem is more important than administration, or organizational structure, or areas of responsibility for subject coverage or for handling categories of documents. The network problem is an access problem, and the access problem is essentially a file problem. It is a problem, therefore, of what librarians, in their old-fashioned terminology, call bibliographical control--control of the record surrogate for the actual informational piece, the original informational package.

For the ultimate national network, which of course must be envisioned as an automated system, with fast response-time, even real-time capability, there is, then, an overriding need to develop a standard record, with a full range of appropriate codes, as the lingua franca of the entire system. The standard record should be modular in format, open-ended, multi-purpose, highly manipulatable, and responsive to the need for a wide variety of products and services, which the system must be capable of providing.

It is from this, the technical end, that we in the Library are approaching the network problem. The automation program was effectively launched with the release, early in 1964, of the 88-page report Automation and the Library of Congress, which was compiled by a team of experts under the direction of Gilbert W. King and was supported with funds made available by the Council on Library Resources. This survey team declared that the automation of the Library's central bibliographic record was

technically and economically feasible and that automation would enhance the adaptability of libraries to changes in the national research environment and would facilitate the development of a national library system.

The Library's automation program has at present two parts. The first is a system-development program which, directed toward the automation of the central bibliographic system, is being carried out in seven phases: (1) survey of the present manual system, (2) system requirements analysis, (3) functional description of a recommended system, (4) system specifications for equipment and procedures, (5) system design, (6) implementation of a new system, and (7) operation of the new system. The third phase--description of the bibliographic functions in system terms--is scheduled for completion by January 1968. It is planned that Task Four will commence in the fiscal year beginning on July 1, 1968.

A related program, the MARC (MAchine Readable Catalog) Pilot Project to test the feasibility and desirability of distributing cataloging data in machine-readable form, began in November 1966 with weekly tape distribution to 16 libraries in the United States. These libraries, in turn, have supplied the tapes and/or MARC print programs to 24 secondary MARC participants. The Pilot Project has been limited to cataloging data for current English-language monographs, but, as an extension, it is planned that coverage will include several other languages. A new tape format (MARC II), based on reports from and visits with the participating libraries and the Library's own experience with the MARC I format, is being devised and will be announced later in 1967.

The MARC II format will emphasize the transmission of bibliographic data rather than the local computer-processing requirements of the recipients. It will thus aim at convertibility rather than compatibility. This means that a library receiving a MARC II tape will probably have to convert to its own tape format. The conversion will be made without human intervention, however, and will be required only once. The new MARC format will be universal enough to accommodate a large variety of material. Until the extensions and modifications are completed, Project MARC will continue to be an experiment. By July 1968, the Library expects to be ready to sell, through its Card Division, machine-readable records, as well as catalog cards, to all interested libraries. At that time, it is also expected that MARC coverage will be extended to monographs in French and German.

This statement of the main outlines of the Library's automation program is necessarily brief and may convey an impression that our objectives are too limited. On the contrary, our goals are very broad. For that reason, with all the technical problems that await solution, the time when they can be achieved may be more distant than we would like.

Perhaps the most immediate dividends, beyond those just described, may be expected in the more efficient performance of essentially managerial operations, such as extending and expediting the Library's vast card distribution service. The keeping of interlibrary loan records and internal charge files can certainly be improved, perhaps to a revolutionary extent. When a significant body of pertinent information becomes available through electronic devices, the compilation of specialized subject bibliographies will be facilitated in terms both of number and depth of coverage. Already, through the interest shown in the MARC Pilot Project in British library

circles, there is opening up the prospect of the exchange between countries of nationally compiled bibliographic data in machine-readable form, with all that such a possibility implies for the improvement and greater effectiveness of bibliography and cataloging around the globe.

We would stress, therefore, that current developments are only a part of the Library's continuing interest in research and planning for better library and information services. The time frame for the future is difficult to predict, but the target date for the operation of the Library's automated central bibliographic system is 1972. Whether that precise deadline can be met or not may be a moot question. When that step has been achieved, however, we are confident that it will be a major contribution not only toward national but toward world-wide control of bibliographic information.

As we all look, then, toward the development of an automated national, and eventually international, library and information system network, we must squarely face the fact that there is only a limited amount of money, time, and people to be devoted to the problem. If the hundreds of thousands of dollars and the thousands of man-years that have already been spent for so-called national system planning teach us anything, it is that nobody yet knows enough to be able to draw up effective national system plans. If we would seriously hasten the time when the gap between the <u>now</u> and the <u>then</u> can be closed, we must turn our energies and our intelligence toward the solution of the considerable range of technical problems that require attention. The Library of Congress makes no pretense to omniscience; it could not alone solve all the problems even if it desired to do so. Progress, we believe, will be made most rapidly and effectively through cooperative

efforts to carry through a well-ordered program of research, which is the first step in the evolutionary process leading to a national system.

When we turn for illumination to a prophet of automation, we find that he views the phenomenon which others have called an explosion as something exactly opposite. In his much-discussed book, Understanding Media, Marshall McLuhan writes: "After three thousand years of explosion, by means of fragmentary and mechanical technologies, the Western World is imploding. . . . Electric speed in bringing all social and political functions together in a sudden implosion has heightened human awareness of responsibility to an intense degree. . . ." The implication of the compressing force of electronic technology, applied to the realm of information, is not merely that the old "mechanical" patterns of performing operations in lineal sequence become outmoded, but that the very definitions that divided knowledge and knowledge-based activities, such as teaching or scientific research, into disciplines and subjects are swept away. The movement is toward integration, rather than separation; toward total participation and total commitment, rather than fragmentation and disunity.

What is already happening in the library and information community as it goes forward into the electronic age would seem to bear out this forecast of the nature of things to come. Cooperation, integration, total participation, and commitment are, we believe, already unfolding realities.

The National Library Concept

The Library of Congress, like all human institutions, is the product of its past. As Federal agencies go, it has already had a very long history, having been established on April 24, 1800, in the act for the removal of the seat of Government to Washington. As its name implies, the Library of Congress was at first a parliamentary library, but after the destruction of the original small collection in the War of 1812, when the British burnt the Capitol (1814), and the subsequent purchase by the Congress of Thomas Jefferson's personal library of some 6,000 volumes, the merely parliamentary character was forever altered. Jefferson's library and the classification scheme he had devised for its organization embraced all fields of learning and determined that henceforth the collections of the Library of Congress would be universal in scope. Universality remains a fundamental principle of the Library's philosophy and of its services and activities. Any attempt to alter that principle or to fragment its collection would be viewed, not only by the Library, but, we are convinced, also by the Congress and the American people as destructive of one of the Nation's most precious heritages.

During the nineteenth century, the collections were opened to the public and were greatly augmented by means that still form the basic pattern for acquisition. Materials were acquired not only through annual Congressional appropriations, but also by copyright deposit, international exchange, special purchase (the Peter Force Collection), gift (the Joseph Meredith Toner Collection), and official transfer from other Government departments. So great was the influx of material that by 1871 the Library

was overflowing its quarters in the Capitol and was obliged to seek authorization for a separate building. Although the first appropriations for this purpose were granted in 1886, it was not until 1897 that the present Main Building was ready for occupancy. A second building, known as the Annex, came into service in 1939, a good many years after the Main Building had passed the saturation point in terms of housing collections and staff. Now they, too, are overflowing. It has been necessary to utilize rented space to afford temporary relief from the congestion, and recently preliminary plans for a third Library building, to cost $75 million and to be erected on a large vacant plot just south of the Main Building, have been approved. This structure, authorized by P. L. 89-260 and to be known as the Library of Congress James Madison Memorial Building, will more than equal the space in the Library's present two buildings. If funds are made available as needed and there are no further delays, present expectation is that the Madison Building will be ready for occupancy in 1972.

In a limited way, the functions of the Library of Congress are reflected in its present organization. In addition to the Office of the Librarian, there are six departments.

The Administrative Department is responsible for the Library's central fiscal and personnel administration, the preservation of library materials, the photoduplication service, and the general housekeeping operations of the Library.

The Copyright Office is responsible for administering the Copyright Law, examining and registering claims to copyright, recording assignments and related documents, furnishing copyright data and other

information about copyright to the public, indexing and cataloging all registrations and printing catalogs of copyright entries, and making studies of copyright problems and recommendations to the Congress for the general revision of the Copyright Law, which is now before the Congress.

The Law Library has custody of legal collections numbering some 1,250,000 volumes and gives a reference service to the Congress, other Government agencies, the bench and the bar, and the public. It is the largest law library in the country, is the Government's only general law library, and is strong not only in American and British law but its collections also contain legal literature of all foreign countries. At the present time, the newly developed subject classification for law (Class K) is being applied to the Library's legal materials.

The Legislative Reference Service is the department of the Library devoted exclusively to providing information, reference materials, and research studies for Members and Committees of Congress and their staffs to assist them in their legislative responsibilities. Although the first duty of the entire Library is to serve Congress, LRS is a relatively small department of about 300 persons--backed up, of course, by the total resources of the Library. Although its services are not directly available to the public, it should be pointed out that LRS, through the Congress, performs a national service and much of the research done for the Congress is embodied in published, publicly available Congressional documents.

The Processing Department is responsible for acquiring books and other library materials from almost every country and in every written language through purchase, exchange arrangements, transfer from other U. S.

government agencies, gift, and copyright deposit; cataloging, classifying, and otherwise preparing materials for use by Congress, Federal agencies, and the public; and preparing hundreds of volumes of book catalogs which comprise the national bibliography and other lists which make known the availability and location of essential research material; and distributing over 74,000,000 printed catalog cards annually to libraries and other institutions.

The Reference Department has custody of all the collections except law, is responsible for services on this material to readers in 13 reading rooms and 325 study facilities, and replies to inquiries in person, by telephone, and through correspondence. This Department also prepares for publication a variety of abstracts, bibliographies, indexes, and lists to make the collections more readily accessible to the research community. In addition, it organizes for use materials in special form, including maps, manuscripts, prints, photographs, microfilms, and motion pictures.

At the outset of this paper, the statement was made that the Library of Congress is the <u>de facto</u> National Library of the United States. There can be no question that the foundation of this claim is the Library's already vast but vastly increasing collections of every type and kind of material in which human knowledge and experience can be recorded--from books and manuscripts to kinescopic and magnetic tapes. But collections alone cannot create a dynamic national library. The national-library concept implies the performance of a broad range of services and activities that sustain the library community of the nation and benefit, directly and

indirectly, the national community of library users--from the world of scholarship to the general public. Although it is not in name the national library, the Library of Congress performs more typical national-library functions than any other national library.

It is instructive to review the list of national-library functions which the Library of Congress is already carrying out. In its national role, the Library:

1. Collects comprehensively, having collections that reflect the national heritage and are universal in scope, and serves as a national center for research.

2. Benefits from intergovernmental exchange, copyright, and legal deposit.

3. Receives gifts to the nation (personal papers, rare books, gift and trust funds).

4. Administers world-wide acquisitions programs, such as the Public Law 480 Program to acquire foreign materials for other libraries, as well as for LC, and the National Program for Acquisitions and Cataloging, authorized by the Higher Education Act of 1965.

5. Devises and keeps up to date classification and subject heading systems that serve as national standards.

6. Serves as the national center for cataloging.

7. Has a national catalog card distribution service, now to include also the distribution of catalog information on magnetic tape.

8. Publishes in book form the national bibliography, the National Union Catalog, issued in the early 1950's, with its supplements, including the National Union Catalog of Manuscript Collections, which

was begun in the early 1960's.

9. Maintains other union catalogs on cards; and the National Union Catalog on cards describing pre-1956 imprints is now being published in 600 volumes of 700 pages each.

10. Gives reference services, in house and by mail, and operates such information "switchboards" as the National Referral Center for Science and Technology.

11. Extends services by participating in interlibrary loan and national and international photoduplication service.

12. Has an active bibliographic and publications program, producing the Quarterly Journal, guides, subject directories, area bibliographies, materials relating to children's literature, etc.

13. Administers the National Books-for-the-Blind Program, expanded in 1966 to include library services to all physically handicapped persons unable to use or read conventionally printed material.

14. Presents concerts, exhibits, and literary programs, including extension concerts and loan exhibits, which enrich the cultural life of the nation.

15. Experiments and conducts research in library technology; presently the major program is directed toward the automation of the Library's central bibliographic apparatus, with the aim of developing a national information-transfer system in which libraries all over the country may participate.

16. Conducts a program for the preservation of library materials, planned as the nucleus of a national program to attack the problem of deteriorating paper faced by all libraries.

17. Engages in national and international cooperative programs, such as the development of the Anglo-American Code for descriptive cataloging, in order to promote standardization and to increase accessibility to the materials of knowledge.

Without a charter spelling out its responsibilities, but with broad powers and Congressional support, the Library of Congress has been able to undertake all these national-library functions. There are many other activities which the National Library of the United States might well perform, but which we have not been able to undertake. Yet there is a real question whether or not a detailed charter, which so many urge, would have been, or would in the future be, more help than hindrance. If areas of responsibility and relationships within and outside the Government were defined in precise detail, we are convinced that a charter would quickly become outdated and would consequently become a serious handicap.

Much the same may be said of the Library's position as an agency of the Legislative, rather than the Executive, Branch of the Federal Government. Looking back over the 167 years of the Library's history, it would be difficult to argue that its freedom of action, its ability to respond whenever a need was strongly felt, would have been any greater, if as great, in the Executive than it has been in the Legislative Branch. The Library of Congress has grown to its present size and eminence not because of where it was placed in the structure of Government but because it has been free to respond to changing times and to needs as they developed and were expressed by the American people through their elected representatives in the Congress.

Looking forward, the Library does feel that it would be highly beneficial if the Congress gave formal recognition to its dual role as the Library of Congress and as the National Library of the United States, to which for so many years the Congress has given its tacit consent and material support. If such recognition is to be fruitful, however, it must go beyond a mere Congressional Resolution. There needs to be a felt demand from the country strong enough to convince the Congress to vote, not just for the addition of a subtitle, "The Library of Congress--the National Library of the United States," but for the funds required for the full support of national-library as well as of LC functions. Basically, it is fiscal support that the Library needs if it is to sustain and expand its role as the National Library of the United States. If we had the necessary money, now that adequate space is in prospect to take care of the physical needs of the next two decades, there is probably little in the way of expanded services and activities that we could not undertake.

If the Commission can focus attention upon the central role of the Library of Congress in the Nation's library and information service economy, and on the need for formal recognition of, and adequate funding for, its national-library functions, and if the Commission can find a pattern of organization and of Congressional bookkeeping that will not necessarily superimpose the whole burden of national-library funding upon the cost of running the Legislative Branch, we believe that the Nation can have, and the Library of Congress can effectively be, the National Library. This objective--a basic step in the evolution of the national library and information service network for which there is so much agitation--requires the serious consideration not only of the present National Advisory Commission

on Libraries, but the continuing attention of a permanent National Commission on Libraries, the creation of which the Librarian of Congress advocated as early as 1962, for library problems are continuing yet ever-changing.

Indeed, it is difficult to see how a national library and information system could operate effectively without a permanent advisory body on a national program. There is, of course, ample precedent from other spheres of endeavor and national interest, from interstate commerce, to finance, communications, etc. Such a permanent Commission should probably enlarge its purview to include information and its title to the Commission on Libraries and Information. It should work with all elements of the library and information community and with the Library of Congress notably and particularly in its role as the National Library. The commission could be the chief instrumentality for bringing the much-talked-of system into being; it could formulate the system, identifying the members, the nodes or interconnections, and the channels of communication. It could propose legislation when and as appropriate, and review legislation proposed by others. It could and should have a lively interest in funding and in cost effectiveness.

For the Library of Congress to perform properly the functions of the de jure National Library, certain assumptions must be made. Adequate funding has been mentioned. So has the guidance and advocacy that a permanent Commission could afford. A third assumption, perhaps implicit in the foregoing, is an "economy" of continuous expansion. A static national library is a contradiction in terms. The National Library must continuously expand its collections, its services, its space, and its support. It must also expand its tools--the staff who are to do the intellectual work and,

in the electronic age, the machines that are to perform the slave labor. The qualifying standards, like the supply, of the competent people and the machines can only increase as the collections and services grow in size and in complexity.

Congressional Appropriations Committees have in recent years frequently recognized this need for the Library to grow if it is to continue as a dynamic national institution. This attitude must be continuously nourished and justified by evidence from the country that LC's role is both viable and vital to the welfare of the Nation's libraries and their users. Also imperative is the whole-hearted support of the Joint Committee on the Library and of the parent Committees from which its members are drawn--the Committee on House Administration and the Senate Committee on Rules and Administration--for the dual-role concept of the "The Library of Congress--the National Library of the United States." The proposed permanent Commission, in other words, would in no sense supplant the Library's traditional relationships with Congress; it would supplement them, bringing nonpartisan, informed advice to the makers of public policy.

Opportunities for Expanded Services and Activities

A basic characteristic of the Library of Congress in the role of de jure National Library of the United States would be that each of the services and activities performed would have both an internal and an external component. Also, the Library would be acting formally--as it does at present informally--in a national setting and on a much larger stage. In certain functions, the Library of Congress-National Library would be the sole agent, the active agency; in others, it would work as a part of, or with, or through another organization, or organizations, or groups. In terms

of its overall responsibilities, it would, as the National Library, act not as a Legislative agency but as an independent Federal agency whose sphere of activity would not be restricted to any one branch but would embrace all branches of the Government, as indeed its services now do. In this regard, though it might not have or need to have the title, it would in fact act as, and be, the national library and information service agency.

In the following discussion of the opportunities and responsibilities for expanded services and activities which the Library could have as the National Library, it is of course assumed that the basic Library of Congress function would remain, and that it would remain basic. Although that aspect of the Library's duties is beyond the scope of inquiry of the present Commission and is therefore not a material consideration in this report, it should be pointed out that the services and activities of the present Legislative Reference Service must keep pace in growth not only with the ever-expanding responsibilities of the Congress but that it should be expected to keep pace with the public-service aspects of the Library.

It must also be pointed out that many of the functions described below are interdependent and overlapping, but no attempt has been made to cross-reference all the interrelationships. Further, when such words as "agency," "center," etc., are used, they should not be construed as names of actual or proposed organizational units but merely as convenient terms for describing functions.

Among the services and activities that the Library of Congress might expand or undertake if it were formally recognized as the National Library

and supported accordingly are the following:

I. Act as the National Acquisitions Agency

The Library would not only develop and maintain comprehensive collections for its own purposes (with special emphasis on the national heritage and with extensive coverage of materials from other nations and cultures), but under such programs as the P. L. 480 Program and the National Program for Acquisitions and Cataloging (NPAC), established by authority of Title II-C of the Higher Education Act of 1965, and the proposed amendments now before Congress, would also acquire materials for other research libraries and information centers on a world-wide basis, serving, in certain areas, as the agent of the other libraries.

In performing this role, the Library would:

A. Extend the National Program for Acquisitions and Cataloging to all countries and all types of materials. Since the spring of 1966 there have been established seven overseas offices in Europe, one in South America, and one in Africa. Arrangements with foreign book dealers and with the producers of current national bibliographies have speeded the flow of books and cataloging data to the Library. To date, however, only books available from commercial booksellers have been acquired and these preponderantly from European countries. As soon as feasible, this program should be extended to every country in the world and its coverage broadened to include all types of library materials--periodicals, newspapers, government publications, maps, music, recordings, prints and photographs, as well as current trade books.

B. Acquire multiple copies of foreign publications. Under NPAC the Library of Congress would acquire at least one additional copy of hard-to-

obtain foreign publications for deposit as a loan set in the Center for Research Libraries. It would be preferable for the Library, as the National Library, to acquire multiple copies, to be placed in a number of strategically located, possibly regional, institutions throughout the United States. Enactment of the proposed amendments to the Higher Education Act would enable LC to take the first step toward implementing this program. The regional depositories should be tied closely to the National Library through a rapid-communications network and should be provided with full bibliographical apparatus which would equip them to serve effectively as regional bibliographical centers. It is expected that experience would demonstrate the advisability of such centers becoming, in some formal way, branches of the National Library, with at least a degree of regulation (for the purposes of standardization, comparability of service, etc.) from the national center, sharing its resources and extending its services far more directly than is at present possible to every State in the Union.

C. Expand and modernize the international exchange machinery. The exchange of publications between governments and institutions is of ever-greater importance. The existing machinery, with mass shipments of "partial" or "full" sets of documents being effected through the International Exchange Service of the Smithsonian Institution, has changed little since the nineteenth century and is badly in need of modernization. The Library of Congress, as the official depository for the publications of foreign governments and as the "supplier" of U. S. Government publications to other nations, should, in its role as the National Library, possess the means for assuring more selectivity and should send abroad only the serials and monographs desired by particular foreign libraries and organizations.

D. Acquire comprehensively and bring under bibliographical control Federal, State, and local government publications. No library is now obtaining anything like a complete set of Federal, State, and local documents. Coverage of non-GPO government publications, many of them of great importance, has been especially poor. Only a portion of the issuances of the States is acquired, and the Library has been able to do little with regard to local (city, county, etc.) publications. The coverage of the GPO's Monthly Catalog of U. S. Government Publications and of LC's Monthly Checklist of State Publications is very incomplete. There is no comparable catalog or checklist for local publications. There should be a reasonably complete set of all the most important of these publications in the Library of Congress and also in a number of other widely distributed centers in the national-library network. Based on LC's statutory right to obtain for its collections and for use in exchange copies of all Government publications and with the aid of the Bureau of the Budget, the Library is taking steps which should bring its coverage of Federal documents to near-completeness. As the National Library, it would perfect and enlarge acquisitions arrangements with State libraries, State universities, and other centers to assure complete local coverage of the issuances of State and county governments and of the larger municipalities in each State. A copy of these publications would be sent to the Library of Congress for the national collections. The Library's expanded coverage of governmental documents should make it possible, through cooperative arrangements with the Superintendent of Documents, to transform the Monthly Catalog of U. S. Government Publications, as well as LC's Monthly Checklist of State Publications, into the comprehensive records they should be. It

would also make it feasible for the Library to initiate a current checklist of important U. S. municipal publications. The growing concern of Congress and the nation with State and urban problems makes a strong collection of such materials necessary for Congressional use, even if there were not other compelling national reasons for their acquisition.

II. Act as the National Center for Library Resources

The "archival" function is one of the principal duties which research libraries especially owe to the communities they serve and one of the great benefits they render collectively to society, yet it has become popular in some circles to deprecate this service and disparage libraries as warehouses full of musty old tomes. However, no library, not even the Library of Congress with all its vast collections, can be expected to be exhaustively comprehensive in the literature of all fields, all countries, and all periods of history, nor, more particularly, can any one depository hope to possess more than a tithe of such special record materials as manuscripts, rare books, prints, photographs, etc.

Nevertheless, as the National Library in fact, the Library of Congress is already a "library of record." It would therefore be in a good position to take the leadership in systematically creating a national center for library resources, which might be physically decentralized, as previously suggested in regard to foreign materials, but might operate as a regional system under LC's direction and utilize uniform bibliographical control apparatus and rapid communications media. Some of the means by which the "archival" services of libraries could be improved include:

A. Extension of the National Union Catalog. The National Union Catalog is already a basic research tool, the effectiveness of which is now

being enormously enhanced through the publication of the pre-1956 portion in book form, as mentioned earlier. However, this 600-volume publication--though it will be the largest single publication ever issued--is an author catalog only, covering books of research value held by some 700 major libraries in the United States and Canada. A future task for LC as the National Library would be to publish a catalog of similar proportions arranged by subject, in order that scholars and research workers may have a systematic subject approach as well as an author and title approach to the wealth of materials contained in North American libraries.

B. Prepare a guide or guides to the total library resources of the United States. The Federal Library Committee has made preliminary studies of the feasibility of preparing a guide to the resources of Federal libraries and is contemplating seeking outside support for such a guide. As the National Library, the Library of Congress should take over this effort and expand it to cover the resources of all significant American libraries, both publicly owned and private. The guide--which in practice might well take the form of a number of guides in particular subject areas--would describe the nature of the collections held, their scope, coverage, organization, and availability. It would not be a catalog of individual collections like the National Union Catalog of Manuscript Collections but summary in nature. Books, journals, government documents, technical reports, and all other library materials should be covered. It should be the Library's intention to maintain the guide on a current and continuing basis through the use of automated methods.

C. Serve as a national center for research, guidance, and information on preservation problems. Preservation problems of the

Nation's libraries, especially those having research functions and serving primarily the community of scholars, are assuming serious proportions. Over the years, some preservation problems have been solved in whole or in part, but many problems remain which require further investigation. Further, certain preservation problems are of such magnitude that they can be undertaken only on a national basis. The Library of Congress is the only agency qualified to assume leadership in this important area and it has already accepted responsibility for coordinating a program designed to preserve the existing collections of research libraries. Specifically, the Library should undertake the following programs:

1. Establish a preservation research and testing program to conduct fundamental investigations, by means of an appropriate laboratory, covering a wide range of preservation problems: from further studies of the accelerated aging of paper, to methods of paper deacidification, to better methods of library binding, to research on new methods of document restoration, to improved or new techniques for preserving library materials in such forms as sound recordings and motion picture films. Further, such a laboratory should conduct testing on a wide variety of products and materials used in preservation work. Leadership would continue in promoting high standards for photographic reproduction, particularly as related to copying for preservation.

2. Establish a program, similar in part to the present general intern program of the Library, to train selected librarians in the basic philosophies, theories, and techniques of preservation.

3. Conduct a comprehensive program for preserving in microform older materials (particularly those in a deteriorating or "brittle" state) of research value.

4. Establish a national preservation program to identify and preserve the "best" copies of research materials. Such a program is required in order to save, for future generations of scholars, those research materials now deteriorating on the shelves of the nation's libraries. The text of these deteriorating materials would be made generally available on microforms. It is important, however, that copies, in the best possible condition, of many publications be preserved in their original form. Such a program may have several aspects, including development of a national underground storage library where materials will be stored under the optimum environmental conditions necessary to assure indefinite preservation, these facilities to include the laboratory and photographic services necessary to insure adequate control and service to the collections. Other aspects of such a program may include designation of particular libraries to serve as official holders of "national preservation" copies, provision of consultative services on suitable storage conditions for such materials, and coordination of a central file of national preservation materials.

III. Act as the National Cataloging Center

A great many American libraries have long looked to the Library of Congress to perform the services of a national cataloging center. The need of research libraries throughout the country to broaden and deepen this relationship was the motivating force behind the mandate incorporated

into Title II-C of the Higher Education Act of 1965, which provided the basic justification for the National Program for Acquisitions and Cataloging and its overseas complement, the Shared Cataloging Program. If this mandate continues over the years to be supported by adequate funding--and we mean here funding adequate for the expanded acquisitions program described above--the Library will be well launched as the national cataloging center.

Among the number of desirable specific undertakings in the cataloging area are the following:

A. Automate the catalog card distribution service. The Library of Congress began in 1901, as a national service, to make its printed catalog cards available to other libraries. In the fiscal year ending June 30, 1967, some 20,000 libraries purchased more than 74,500,000 Library of Congress catalog cards; receipts from the sale of cards, book catalogs, and technical publications--income which eventually goes into the U. S. Treasury--totaled $6,289,000. The cards provide full and accurate descriptions of the titles cataloged, including the subjects covered, indicate the presence of bibliographies, and give two alternative subject classifications, one according to the Library's own system and the other that of the widely used Dewey Decimal Classification. Library of Congress printed cards are increasingly regarded as the standard in this country and abroad. Yet the system of distributing to subscribers is no longer rapid enough to meet the urgent need of libraries for prompt cataloging information. Most of the card distribution operations would lend themselves to mechanized data processing, with a resultant speeding up and improvement of the service. Although the Library has taken initial steps toward this goal, a full-scale effort, with the required funding, is required to push the conversion to completion with the least possible delay.

B. Publish a current national union subject catalog. The product of the Library's cataloging efforts is made available not only through the printing of catalog cards but also in the form of current book catalogs, issued monthly and cumulated quarterly, annually, and quinquennially. The chief of these book catalogs, the National Union Catalog, is now being sent to over 1,700 libraries, both foreign and domestic. With the Library's stepped-up program for the acquisition and cataloging of foreign-language materials, the NUC has become a truly international bibliography. Issued since 1956, it reproduces the cards prepared by the Library of Congress and, in addition, those from nearly 1,000 other cooperating libraries; it also indicates which libraries hold each title. Nevertheless, the utility of this publication is limited by the fact that it provides only an author approach to the holdings of American libraries. The Library of Congress should begin to issue a companion publication which would list by subject all the titles acquired and cataloged by U. S. and Canadian libraries, thus providing a complete bibliographical service.

IV. Serve as a National Center for Bibliographical Services

The Library of Congress has long been distinguished for the number, kind, and variety of bibliographical services it has been able to offer to other libraries, to scientists, historians, and other scholars working in many fields. If it had formal status and support as the National Library, the Library of Congress would be in a position to improve and expand its bibliographical activities. Its ability to do so will be enhanced when the Library's automation program has progressed to a point where it is anticipated that it will be possible to retrieve bibliographic information on

a subject basis to a greater depth than is now possible, not only from the central catalogs but from the catalogs of special materials. Eventually, it should be possible to compile, through automation techniques, bibliographic information held anywhere in the national library and information system, although such capability is admittedly some years away.

Meanwhile, many libraries will continue to depend upon the book catalogs, and there are many other valuable though less ambitious services which the Library might undertake. Among them are the following:

A. Provide systematic bibliographic coverage of non-Western publications. The publication of the current National Union Catalog, and the project to publish in book form the older portion of the National Union Catalog on cards, now well under way, go far toward providing adequate bibliographic control over publications in European languages. But neither, unfortunately, covers all publications in Oriental alphabets. There can be no doubt that Asian publications will become ever more important to American interests in the years ahead. The Library of Congress, as the National Library, should therefore complete, bring up to date, and publish its union catalogs of Chinese, Japanese, Korean, South Asian, and Near Eastern publications. Current titles in these and other Oriental languages, with locations, should also be listed in the National Union Catalog or a companion publication.

B. Publish comprehensive accessions lists for all countries lacking adequate current national bibliographies. With the expansion of its overseas programs under the P. L. 480 Program and the National Program for Acquisitions and Cataloging, the Library of Congress will be in a position--always provided adequate funding is available--to fill the bibliographical

gap which now exists in most of the countries of the world. The lists it already publishes of its accessions under the P.L. 480 Program in Ceylon, India, Indonesia, Israel, Nepal, Pakistan, and the United Arab Republic at present supplement the national bibliographies where they exist and serve as national bibliographies where there are none. In its role as the National Library, LC should undertake, on a continuing basis, comparable lists of its accessions from all countries where the national bibliography is not sufficiently current, detailed, and comprehensive. Where possible, these countries should be encouraged and aided to begin the issuance of such bibliographies on their own. But, until these countries can take over the responsibility and perform it in an adequate fashion, the United States, through the Library of Congress, should, for the sake of its own research community, continue to publish the accessions lists.

C. Create new bibliographical tools. The Library's subject classification system, in 20 volumes, is the most extensive in existence and is being adopted by a rapidly increasing number of libraries, both large and of medium size. This trend seems certain to continue. The Library should develop and publish a manual of guidance and instruction in the use of its classification schedules.

Each of the score of volumes making up the Library of Congress classification system is supplied with an index, yet there has been no combined index to the entire classification. Such an index is now being cooperatively developed. It should be published and made widely available.

Each of the author and subject headings used in the Library's catalogs has been "established" by LC on the basis of research and investigation. At present this background information is to be found only

on cards filed in the Library's Official Catalog, now available only to the staff. If this information were edited and published, it would save other libraries much unnecessary work in establishing the same headings.

The Library's shelflist is, in effect, a classified catalog of all the materials which have been processed and added to its collections. It now exists only in card form. It should be published and provided with an index in order to give other libraries the benefit of a classified (subject) approach to the immense collections of the National Library, thus supplementing the author approach now available through the Library's published catalogs in book form.

V. Serve as a National Center for Research and Training in Library and Information Science

The movement during the last decade or so for the creation of a national library and information system has brought into sharp focus the need for a central technical authority with responsibilities for the development of standards and techniques applicable broadly to library and information work. For lack of such an authority, we have seen the mushrooming growth of "national system" proposals and a variety of schemes for collecting, organizing, and communicating bibliographic and other literature-derived information. If solid progress is to be made toward the development of the kind of national system that is needed--that is, one that will work--the library community must have a mechanism for making its experience and expertise felt in this field which is so peculiarly its own.

The second, and related, need that arises out of this movement and out of the increasing demand for library and information services is the necessity for an adequate supply of personnel, trained and experienced in

library and information science. Unless and until such a supply is guaranteed, libraries and information services must expect not only to have to "make do" with unskilled personnel for the performance of workaday tasks, but to find specialists outside of their profession making the big decisions in the intellectual matters that determine the quality and effectiveness of library and information services.

The Library of Congress, therefore, in its role as the National Library, should have a formal responsibility in the realm of library and information technology and in the training or retraining of professional personnel. The following are some of the kinds of specific tasks it might undertake:

A. Create a national technical processes service. The Library of Congress has already established a Technical Processes Research Office to serve its own needs. Its functions should be broadened and its services extended on a national scale. It should undertake research projects for other libraries, give a reference and information service in this field, create and provide all necessary materials relating tc automated systems of cataloging, subject analysis, classification, indexing, filing, storage, retrieval, and bibliographical control required to meet the expanding needs of the national library and information system. The recently established Library of Congress Automation Techniques Exchange (LOCATE) serves as a focal point for information on activities in the area of library automation and provides reference services on this information. LOCATE collects reports, manuals, forms, worksheets, flow charts, articles, etc., published or unpublished, which describe automation programs. This service should be continued on a permanent basis and should be broadened in scope to cover all of the foregoing subjects.

B. Create a national, automated system of subject controls. Through the use of computers and photocomposition, the Library publishes successive editions, with monthly supplements, of the list of subject headings used in its catalogs. This is by far the largest of existing lists and is a standard for all American and many foreign libraries. The magnetic tapes used to print the seventh edition of the list have just been made available for sale to libraries who wish to experiment with them in developing a system of automated and bibliographical controls, and edited tapes, stripped of the printing instructions, will also be obtainable. As the National Library, the Library of Congress should establish promptly a full-scale, continuing program to increase the depth of its analysis of the subject content of all the types of publications it acquires, catalogs, and, through its bibliographic projects, indexes, and should make the results available in machine-readable form. It should also develop subsystems of subject control to meet the special needs of particular categories of users--for example, the scientific and technical community--and provide them with instructions or codes of application.

C. Translate the Library's technical publications and bibliographical tools. As the National Library of the world's most "advanced" nation (not least in bibliothecal techniques) and in the interest of promoting and facilitating the development of an international information system, the Library of Congress should promote and coordinate the translation of these publications and when possible make available in machine-readable form its many basic and essential instruments for bibliographical control. These would include its list of subject headings, its own classification system and the Dewey Decimal Classification (edited by the Library of Congress),

its filing rules, Cataloging Service Bulletins, and all the new bibliographical tools mentioned above. These publications should, when possible, be translated into all the principal foreign languages. Provision should also be made for the prompt translation and distribution of revisions.

D. Train American librarians. The libraries of the United States, having long regarded the Library of Congress as the de facto National Library, have looked to it for leadership and for a wide and increasing range of services on a national scale. Its techniques and procedures, particularly those having to do with acquisitions, cataloging, classification, and bibliography are recognized as standards to be followed. This trend is an accelerating one but many librarians at all levels feel a need for a more intimate knowledge of the National Library than can be gained through library schools, reading, or casual visits. Such knowledge is also needed by information specialists who are not necessarily librarians. Similarly, there is a need to train subject specialists in charge of special collections in libraries who are not necessarily or even likely to be technical librarians and information specialists. The Library of Congress should establish a large-scale program for bringing to it members of the staffs of U. S. libraries and all other kinds of information personnel for intensive training in its methods and technical processes, including LC's programs for handling special materials.

E. Train scholars to administer research collections. Beginning in 1968, the Library of Congress and the George Washington University will offer an affiliated doctoral program in American Thought and Culture, with emphasis on research in organizing and handling library materials.

Doctoral candidates in the fields of American civilization or of

civilizations to which American culture is related will study with scholars on LC's staff, who will offer courses and supervise research. Instruction will be offered both at the Library and at the University.

The program will help meet a national need for scholarly administrators in research libraries, particularly in regard to special collections. It will also enrich graduate study by bringing students into broader but more intimate contact with the unique collections of the Library of Congress. Such a program could be expanded to include other subject specialties.

F. Train foreign librarians. In a shrinking world, the National Library of the United States has at least implied responsibilities that extend far beyond the boundaries of this country. The Library of Congress should, in cooperation with other government agencies, coordinate and promote a massive, systematic program for the training of foreign librarians in American library techniques, with emphasis on the bibliographical procedures, broadly interpreted, of the Library of Congress. Foreign librarians at all levels should be brought to the Library of Congress for intensive instruction and Library officers should be sent, on request, to foreign libraries to give courses and conduct seminars in existing libraries and to aid in the establishment of new libraries and library services.

VI. Serve as the National Center for Data on Serials

For the past several years, the Library of Congress, together with other libraries and interested organizations, has been studying the possibility of establishing a control-data program for the improved handling of journal literature. The periodical is often called the lifeblood of research, yet it is a form of literature that has long been a serious

problem for libraries and information services, professional societies and publishers, as well as users. The problem was considered at some length by a task force of the Committee on Scientific and Technical Information (COSATI) and a study was made of the feasibility of creating a broad-based, national, journal-control project. The report, made by the Information Dynamics Corporation, concluded that the project, while feasible, would not be inexpensive, would have to be computer-based, would require the cooperation of many libraries, especially the Library of Congress, the National Library of Medicine and the National Agricultural Library. The report, while it was not specific on the matter, clearly pointed to the Library of Congress as the agency best qualified to manage, house, and operate the project. The Library agreed and presented a plan of attack on the problem.

A small beginning has recently been made with funds provided by the National Library of Medicine, the National Agricultural Library, the National Science Foundation, the Library of Congress, and the Council on Library Resources, Inc. A phased project, looking toward a system design, is being carried out by the Library's Information Systems Office, with the cooperation of the Processing and Reference Departments. It is expected that, eventually, large-scale funding on a continuing basis will be required, but the activity is certainly a proper one for the national library.

Such a national serials data program would offer libraries and other organizations concerned with serial literature a variety of bibliographical and management information. One major benefit of the program would be the ability to produce a fourth edition of the Union List of Serials (and future revisions) by computer methods. The third edition excluded many categories of serials (government publications, administrative reports,

newspapers, law reports and digests, international conferences and congresses, etc.) which the national serial data program might well include. The program will also provide a ready method for updating information (the third edition of the Union List is already out of date as a record of both listings and holdings). Another by-product of the serials program would be the ability to produce New Serial Titles, which is more inclusive than the Union List but omits newspapers and certain other categories of publications, by machine methods.

The national serial data program was originally conceived as a current service oriented particularly toward science and technology. The Library of Congress from the outset insisted that it must, at least eventually, be extended to all subject fields. As the National Library, LC would of course also wish to extend the coverage backward in time, and to other than U. S. holdings, so that the program would, at maturity, become in effect an automated, world-wide union list of serials, old and new, that could be maintained on a current basis.

VII. Serve as a National Technical Reports Center

A subset of the serials control problem that is perhaps more exasperating and challenging than any other is that of controlling technical reports, materials in near-print form that are not considered publications, that receive limited distribution, but that contain the valuable results of current research, much of it done on a contract basis. The Library has in its general and special collections approximately a million such reports, and is receiving on a current basis from Government, industrial, and academic sources in this country and abroad upwards of 50,000 new reports a year and the figure is growing. Most of these receipts are kept, uncataloged, in a

special collection, serviced mainly through the use of finding aids issued by the producer organizations, although certain important series are cataloged and added to the Library's general collections.

Many other groups, within and outside the Government, have struggled with this hard-to-handle form of literature, which is of critical importance to the research and development community not only in the United States but around the world. The Government has established, from time to time, special agencies to deal with the problem--the Office of Technical Services, the Armed Services Technical Information Agency, the Defense Documentation Center, and, most recently, the Clearinghouse for Federal Scientific and Technical Information--but no definitive solution has been found. Attempts have been made to afford local access, not only to industrial but also to academic users, through regional depositories, but these have failed for economic and other reasons.

The Library of Congress has had long experience with the technical-report problem but has been without a mandate to assert the leadership that a solution would require. As the National Library, however, the Library should have the responsibility for acquiring all significant literature and for offering whatever range of services users need. This responsibility could be effectively discharged if the legal and funding basis could be provided for the Library to assume and broaden the functions now assigned to the Clearinghouse for Federal Scientific and Technical Information in the Department of Commerce.

VIII. <u>Serve as the National Referral Service in All Fields</u>

Five years ago, with National Science Foundation funding, the Library established the National Referral Center for Science and Technology. This

Center has the threefold function of inventorying all U. S. information resources relating to science and technology, of publishing general and special book-form directories of such information resources, and of providing, in house and by mail, responses to requests for referral information. The Center does not answer bibliographical or substantive questions but, through its inventory of resources, refers users to the persons, organizations, or services best able to render expert assistance.

The referral service technique is not a new one in information transfer; it is rather an attempt to categorize and systematize a service which libraries had long provided in a more or less haphazard way. The Library believes that the Referral Center has proved its value and that it should be a permanent feature of the Library's service. To achieve maximum effectiveness, however, it should be extended to cover information resources in all fields of scholarship and endeavor.

Through the efforts of the State Technical Services programs, administered by the Department of Commerce, impetus has been given to the development of a considerable number of local and State referral activities pertaining to industrial and commercial enterprise. Similar developments might well take place in other spheres of interest. At present a basic service of LC's National Referral Center is to serve as the central clearinghouse through which not only individual information resources but these local and State referral centers are brought into fruitful contact with each other and with the nation-wide complex of potential users.

IX. Serve as the Focus of a National Interlibrary Loan System

The Library of Congress has provided a national service over many years through its participation in a nationwide interlibrary loan service.

Materials from the Library's collections that are not at the moment in demand by Congress and the rest of the Government and that cannot be obtained otherwise are now lent to other libraries in this country and abroad when there is a genuine scholarly need. With the improvement of facsimile transmission methods and other means of electronic reproduction, the availability of the Library's research collections can be and undoubtedly will be augmented, although there is the troublesome problem of copyright, which will be discussed later.

Plans for making available additional copies of books received through the operation of Title II-C of the Higher Education Act are under discussion, as already noted, and may result in regional deposit collections and a further extension of the interlibrary loan service for these publications.

X. Serve as a National Research and Information Center

Through its many reference and bibliographical services, the Library of Congress has long served as a national research and information center. If it is to do this on a more formal basis as the National Library, it must in[illegible]y certain of its activities and, concomitantly, increase and improve the quality of its staff of specialists. Among other services, it should, beyond what it is now doing, provide:

A. Assistance and guidance in the use of the Library's collections. This kind of service should constitute a model for other libraries in the country. Orientation courses, seminars, and publications programs should be increased and expanded; individual advice and help from the Library's specialists should be made more freely available; and vastly improved physical facilities, especially for visiting scholars, should be provided.

B. Information about and from the Library's collections. Providing bibliographical information about the Library's collections through guides, calendars, registers, descriptive bibliographies, checklists, contributions to union lists and catalogs, etc., is a traditional responsibility that, with adequate staff, can be considerably expanded. Providing substantive information from the Library's collections (abstracts, reports, indexes, etc.) to the scholarly community as is now done for the Federal Government on transferred funds would be a logical extension of the Library's national responsibilities.

C. Information about the collections and services of other libraries, which constitute segments of the Nation's total resources for research, should be collected and disseminated.

D. Data about all other kinds of information resources throughout the world should be made available through directories of research activities, rosters of special competence, bio-bibliographies, etc.

The above services could be best carried out through a congeries of centers in LC which would combine and coordinate the various information, bibliographic, and referral functions now carried on in varying degrees by the divisions of the Reference Department. Although traditionally a part of normal, though limited, reference service, these functions could be much better adapted to meet national needs if they were regrouped and greatly expanded in depth. As stated above, the success of the National Referral Center for Science and Technology is a good indication of the direction in which information and referral centers should move. The need for bibliographic centers, as expressed by various professional groups (with one such operation recently funded by a foundation) is further evidence of

this trend. The final shape of the centers must be left for future development but the following pattern is envisaged. A series of centers on the various geographic areas and cultures of the world: the United States of America, Canada, Hispanic America, the Orient (possibly with five subdivisions), Slavic and Central Europe, Africa, Western Europe, and Australia and the Pacific Islands.

1. The United States of America. The Library's collections on American civilization are unexcelled; in manuscripts, maps, music, prints, photographs, and in all other forms of research material, the collections are unequalled in depth and in scope. The Library has a long tradition (over six decades) of bibliographic and editorial activity in this area, ranging from such documentary publications as the Journals of the Continental Congress (1904-37) to the comprehensive Guide to the Study of the United States of America (1960), a supplement to which is now in progress, with numerous bibliographies, registers, calendars, catalogs, and other guides to the vast holdings in this area. It has also a tradition of high-level scholarship. Because of its unequalled holdings, its bibliographic and scholarly competence, and its responsibilities to American scholarship, existing programs should be expanded and extended in scope and new means devised for exploiting the Library's treasures. Among these should be mentioned: publications (in modern edited texts or in facsimile reproduction) of some of the basic primary resources for study of American civilization; descriptive guides to the holdings of LC's major custodial divisions relating to American civilization; descriptive guides (some in the form of exhibit catalogs) to LC resources for specific topics of research

in American civilization, particularly those resources which are separated for custodial purposes in different divisions of LC; bibliographic lists of publications in one or more of the disciplines comprising American civilization or of the total field; abstracts of studies in American civilization (rather than mere enumerative bibliographies); descriptive guides to the state of the literature, a selective and discriminating discussion of recent publications of studies in American civilization; union catalogs and registers of holdings of special research materials in American civilization not provided for in existing publications.

It will be evident that some of these activities are also being carried on elsewhere (e.g., under the auspices of the National Historical Publications Commission); wherever this is true, the center would play a referral role, developing lists of work in progress as well as registers of material worthy of editorial or bibliographical attention. In addition to its referral role, the center would participate and cooperate with other parts of the Library and with institutions engaged in related bibliographical and publication activities, seeking to facilitate and supplement, certainly not to duplicate or supplant. It would also be the focal point for participation in such graduate-study activities as the program in cooperation with George Washington University, which is described above.

2. Other areas. As in the case of the United States of America, the Library has collections on the civilization and culture of other areas that are in some cases unique, and in most respects overwhelming. In Chinese and Japanese, for example, the collections cannot be equalled in this country or, in some aspects, elsewhere. Most of the area collections

had their inception long before other research libraries (with a few exceptions) anticipated or recognized the needs by the Government and the scholarly community that became obvious in the 1930's and urgent thereafter. Recognition of the national character of the Library's area collections has been borne out by the grants and endowments given to the Library for their exploitation over a period of several decades. Their full potential, however, has yet to be realized. This could be approached most effectively by concentrating bibliographical and information activities in centers of the kind described here. Programs could include compilations for the Asian, Near Eastern, Slavic, and African areas similar to the highly useful Handbook of Latin American Studies; union catalogs and listings of specialized language materials, one example of which is the Monthly Index of Russian Accessions; union lists of newspapers and periodicals; and other bibliographical undertakings to bring under control the unique holdings of the Library of Congress, as well as to make known resources existing in other collections.

Coordination of bibliographical activities throughout the country would be a major responsibility of these centers. Close cooperation with scholarly and professional groups, research libraries, and foundations should be carefully worked out and the centers would play an important referral role in respect to bibliographical and other scholarly work in progress, as well as to information about publications in their spheres of interest.

Finally, the centers would answer needs for substantive information and for expert assistance in using the Library's collections, and would continue to develop the collections. Here again, the services and staff would require considerable expansion, including additional competence to carry out the selection responsibilities necessary to the enlarged

acquisitions program described earlier in this paper.

Just as the subject matter of a discipline does not have rigid boundaries, it is recognized that all knowledge cannot be divided nationally or regionally. Many of the programs suggested above would require joint efforts by two or more centers. Union catalogs and bibliographies of non-book material, for example, sound recordings, motion pictures, maps, music, prints, would not necessarily be limited to the products of a single country or area. This, however, is an administrative problem, the solution of which will lie in close coordination of the work of the centers and of the various custodial divisions.

3. Center for Science and Technology. Of all the disciplines, science lends itself least well to national or regional treatment. While a country's scientific achievements may be an integral part of its culture, they are usually so closely related to similar activities in other nations that undesirable fragmentation would result if a national or regional approach were adopted. Hence a separate center for science and technology (including some of the social sciences) seems preferable for information and referral purposes.

The appropriateness of such a center in the Library of Congress requires little argument. With its vast science collections (the largest in the world), its access to conventional publications through the immense acquisitions machinery mentioned above, its ability to procure technical report literature on a scale unequalled in any other library, its years of experience in giving a national bibliographical service to other Government agencies, the present Science and Technology Division, along with the National Referral Center for Science and Technology which it administers, is an eminently logical choice for performing the functions of a national information and referral center for science and technology.

The nature of the scientists' information needs, the heavy use of current materials, the greater availability of professional and commercial abstracting and indexing sources than for any other subject area, and the presence of many highly specialized information and document centers in the Government and elsewhere would require a center that would differ somewhat from the others. Its functions would be to:

(a) Provide expert advice and assistance (locally or remotely) in the use of the Library's collections, largely through computerized methods. Directly by means of consoles, or indirectly through machine-produced bibliographies, reviews, evaluation reports, etc., the center's specialists would fill the role of both teacher and researcher working in and through the collections and computer stores of the Library for the benefit of individual scientists.

(b) Provide expertise in the development of new bibliographic control services, such as a National Union Catalog of Scientific and Technical Monographs, and a National Serial Data Service for Science and Technology (as a subset of the over all serial data program), to name only two of the many tools needed to bring under control the Library's enormous collections in science and technology, regardless of form. This service would be largely for other scientific and technical centers in the national system.

(c) Develop and plan for the development of the Library's science and technology collections, especially in respect to unpublished and difficult-to-acquire scientific reports and other materials not available through conventional channels.

Exactly where this center would fit in the national science and technology information system, and particularly its relationship to other information centers in the Federal Government, must await the results of further study. Whatever the outcome, the basic concept should not be changed--that of a national service given by a highly skilled group doing the intellectual work that only people can do, while the machines do the rest. This will require augmenting the present staff, speeding up automation studies, and installing the most efficient system and equipment. (The foregoing statement applies to the other centers as well, but is singled out here for mention because of the greater urgency for automating science information resources.)

XI. Serve as a Publishing Center

A greatly strengthened Publications Office, capable of handling the products outlined in this paper would be necessary. The Library's obligation to produce work of a high level of scholarship, similar to that found in a university, is a real one and should be supported by a publishing program equal to that of a university press of a similarly high level. The aids to research prepared by the projected centers would demand the best in editing, production, and promotion. The imprint, "The Library of Congress--the National Library of the United States," should be a silent witness to the excellence of the institution's publications.

A national library should not only publish bibliographic aids to scholarship but also facsimiles of maps, manuscripts, prints, entire books, and similar rare and unusual items in its collections, to say nothing of educational and teaching materials to be used in the schools. Such a program,

to be of value to the Nation, calls for careful planning and preparation, imagination, scholarly attitudes, and technical excellence. It would cut across many subject and geographic areas if quality reproduction of the riches of the national treasurehouse are to be seen and used by the scholar, owned and appreciated by the public.

Equally important is the Library's responsibility to make available, to libraries and to similar institutions, quickly and in appropriate form, the results of LC's technical and experimental programs--surveys and studies in such fields as preservation, microreproduction, and automation. Also, if the Library is to make the Nation as a whole aware not only of the sources of their national heritage but also the vast resources available to American minds, it must engage in a program for the publication of descriptive, scholarly sound, but popularly written booklets about the Library itself, its special collections, special services, and special programs.

The wide range and the size of the potential publishing program demands close coordination, not only within the Library but with the two other national libraries, other agencies, institutions, scholarly presses, professional associations, and publishing firms. The Library at present carries on its publishing through a program that, on paper, is centralized administratively, but, of necessity, is largely decentralized in fact.

LC's Publications Office should cooperate with the Preservation Office and with such Government agencies as the GPO and the National Bureau of Standards in testing and developing advances in paper, binding, printing, and the graphic arts. It should make use of permanent/durable paper for appropriate publications and encourage its use in the publications program of Government agencies, other libraries, and at least the scholarly presses. Computer applications to printing promise

improvements in schedules and, it is to be hoped, in quality as well as in reduced costs. The effect of the revolution in printing will be especially pronounced in bibliographic publications, notably in the so-called technical publications. Non-bibliographic publications, however, will also be affected. Already the Library has produced some publications through the application of computer technology, and it must continue to keep up with and apply these advanced methods in its publication program.

XII. Serve as a Center for Photocopying

Because of the scope and unique nature of many of the collections of the Library of Congress, it has a responsibility to make these collections available to the research community. Many scholars cannot visit the Library personally, or, if they do, they often want to retain portions of their research documentation in a form for later restudy. A copying service is necessary for making these valuable resources available more widely.

Essential requirements of a copying service include: a broad range of copying techniques to satisfy a variety of needs; products of the highest technical quality; reasonably rapid response to requests; costs comparable to similar services elsewhere but consistent with quality; and reasonable accessibility to collections, consistent with legal restrictions and preservation objectives.

The Library has done much in the past to meet these requirements, but in pursuing national objectives it could expand this service further as new copying techniques are developed. Continued efforts are made to maintain currency in operations and to keep costs down. Financial support from

sources other than sales may be required, however, in order to continue to serve specialized copying needs without excessively high prices.

XIII. Administer the United States Copyright Law

The Copyright Office, one of the Library's six departments, in addition to performing the functions summarized earlier, has for the last 10 years been working on a major revision of the copyright law. The act now in force is essentially the 1909 statute. Some features of the revision bill, which has passed the House of Representatives and is now before the Senate Judiciary Committee, are of special concern to libraries and to their users.

The revision bill contains, for the first time, a statutory declaration of the fair-use doctrine. What has finally emerged as Section 107 of the House bill (H.R. 2512) consists of two interrelated sentences. The first states that fair use is not an infringement and cites "criticism, comment, news reporting, teaching, scholarship, or research" as examples of the purposes for which fair use is permitted. The second sentence lists four major factors, distilled from the court decisions, to be considered in determining what fair use is: "(1) the purpose and character of the use; (2) the nature of the copyrighted work; (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and (4) the effect of the use upon the potential market for or value of the copyrighted work." This does not "change, narrow, or enlarge" the doctrine in any way, according to the report on the bill.

The bill as passed by the House contains a specific exemption permitting manuscript collections to be reproduced under certain circumstances.

Unpublished works--in which the author and his heirs now, under the common law, have literary property rights with no time limit--will, for the first time, be governed by the statute. Because it was argued that a limited right to reproduce unpublished collections (photographs, motion pictures, and sound recordings, as well as manuscripts) in archival and manuscript repositories would not harm a copyright owner's interests but would be a positive aid to scholarship and would permit the making of security copies, Section 108 of H. R. 2512 provides that they may be reproduced under certain circumstances. There must be no "purpose of direct or indirect commercial advantage" and commercial reproduction must be for "preservation and security" or for "deposit for research use" in another "nonprofit institution" that has "archival custody over collections of manuscripts, documents, or other unpublished works of value to scholarly research." This would permit photographic or electrostatic reproduction but not reproduction in machine-readable form for use in an information storage and retrieval system. The report on the bill makes it clear that this provision of law could not be used to justify copying if the donor had placed specific restrictions upon this.

The change in the duration of copyright has also been a matter of considerable discussion. The present term is 28 years from date of publication, with renewal for another 28 years being possible. The new Act provides for a term running for the author's life (from the date his work is written) and for 50 years after his death. For anonymous works and for "works made for hire," which includes corporate authorship, the term would run for 75 years from publication or 100 years from creation of the work,

whichever is shorter. For manuscripts and other unpublished works, the new term would be the same as for published works--life plus 50 years, or, if the author were unknown, copyright protection would expire when the manuscript was 100 years old.

The provision for a term of the author's life plus 50 years is, to the author, the most important single feature of the revision bill. From the point of view of administration, the most compelling reason for adopting this term is that it is the same as that provided for in the laws of nearly all the developed countries of the world.

Of particular relevance to automation and its possibilities for enhanced bibliographic and information services is the input of copyrighted works into a computer system and their output from such a system. The bill as passed by the House makes no special rules for such input or output. Under the general provisions, the permission of the copyright owner would be required, except where the copying is of the limited nature allowed as fair use. Recently, however, the matter has become a major issue. Since it is generally agreed that computer-based systems for the dissemination of the content of copyrighted works are some years in the future and that the copyright problems in this area cannot now fully be foreseen, a bill (S. 2216) has been passed in the Senate to establish a National Commission on New Technological Uses of Copyrighted Works, under the chairmanship of the Librarian of Congress, to study the problems and to make recommendations within three years on the use of copyrighted material in information-transfer systems. The commission's recommendations will be of major concern to librarians and information scientists and will influence

the course that facsimile transmission will take. Meanwhile, it is likely that proposals for a temporary moratorium on liability for the use of copyrighted materials in computer-based systems during an experimental period will be considered in the context of the revision bill.

XIV. Administer the National Library Program for the Blind and Physically Handicapped

The Library of Congress should continue to provide library service, through a network of cooperating regional libraries, for all residents of this country who cannot use ordinary printed materials because of physical handicaps. The Library's Division for the Blind and Physically Handicapped operates the model and demonstration library, which gives direct service to the District of Columbia and supplements the activities of the cooperating regional libraries with its large collections and professional staff.

The Division regularly prepares and distributes bibliographic aids to facilitate use of its resources. It is the national training, certifying, and coordinating center for volunteers who supplement purchased resources by transcribing into braille, recording on magnetic tape, typing books in large print, or who repair sound producers. It maintains a central listing of such volunteer resources.

The Division is the national reference and referral center for information on all aspects of library service to physically handicapped persons. It conducts ongoing research, development, and testing in reading media suitable for persons who cannot use conventional printed materials. It cooperates closely with all agencies and organizations interested in physically handicapped individuals and continuously sponsors or participates in

conferences, seminars, and other meetings to ascertain needs and improve services.

Planning is now underway to utilize electronic production of braille, to apply the techniques of compressed speech and aural indexing in recordings, to use projected microfilm, to encourage the production of large-print publications, and to provide rapid communication not only by telephone but by means of networks of teletype and amateur radio. These steps will lead to the development of needed reference and scholarly collections and services which do not as yet exist. They will also extend the program to a far greater percentage of eligible persons than is now possible by enabling any handicapped individual to read in a form specifically adapted to his needs.

With each of the States soon operating its own library, each will look to the National Library for reading resources, leadership, guidance, coordination, and assurance that every phase of library service will be provided through the best available technological and professional competence.

XV. Serve as a National Center for Cultural Activities

For many years, through the generosity of private donors, the Library has maintained an endowed Chair of Poetry in English and has provided poetry readings, dramatic productions, lectures on music and literature, conferences, festivals, and symposia on literary and other matters, chamber music concerts, and festivals. The concerts and many lectures, poetry readings, and discussions have been made available to the nation through various radio outlets. At present, programs are available only to a limited radio audience and sound recordings can be provided for educational purposes

only to a limited extent. Cooperative ventures in educational TV have been possible on even more rare occasions. Eventually, with adequate endowments or appropriations, all these programs should be available nationally on tapes, kinescopes, or recordings, enabling listeners and viewers across the country to benefit. In an advisory and consulting capacity, the Library's specialists in literature, music, and the arts should continue to develop close liaison and communication with the National Foundation for the Arts and the Humanities and with the numerous privately endowed foundations engaged in supporting cultural programs that are national in scope.

The Library also presents in its buildings exhibits of scholarly excellence but designed to have wide appeal for the million and a half visitors who come to LC each year. Catalogs of the most important exhibits are published to extend the educational and informational value of these displays. Loan exhibits are also prepared so that the American people may have an opportunity, at present quite limited, to enjoy directly and to benefit from the rich collections of their national library. An expansion of this program has already been planned. The availability of extensive exhibit space in its own buildings, once the Madison Building has been completed, will permit the Library to resume an active exhibit program in Washington, which, in turn, will nourish the loan-exhibit program.

Implementation

For this "vision" to become a reality, certain very hard concrete steps must be mounted and, in some cases, surmounted:

1. The first requirement for effective implementation of the proposed national library and information service would be across-

the-board support of such a proposal by the National Advisory Commission on Libraries and continued support by a permanent commission. This permanent commission's most influential service might well be to provide a voice that would speak in universal accents for the needs of all the people and of "all seasons"-- for what is past (and has historical value) as well as for what is (and has great urgency) and what may be (and holds great promise).

2. The next requirement is legislation that would formally recognize the Library of Congress as also the National Library of the United States. The language of such legislation should convey the intent of Congress in a manner so lucid and unequivocal as to command the adherence and support of future Congresses for this dual role. The Joint Committee on the Library, which "considers proposals concerning the management and expansion of the Library of Congress," is the proper Congressional body to take up such legislation and, it is to be hoped, to sponsor it and its objectives with conviction and enthusiasm.

3. Support being in the positive sense the most critical problem of the transition of the Library of Congress from the de facto to a de jure status as the National Library, mammoth efforts must be made to overcome the notion that the price tag on the National Library is an integral part of the price tag for the operation of the Congress of the United States. This notion cannot be overcome

solely from Washington, but the voters of America in every county in the country must be made aware of the benefits that accrue to them personally from the National Library. Their sense of pride in such a national treasure must be touched. The library and information community must also be made even more acutely aware of its National Library. And the scholarly world, which realizes its stake in the welfare of the National Library, must also accept its responsibility to mobilize support for it. Until such widespread appreciation and support is evident, the National Library may not be adequately funded.

Direct appropriations, no matter how generous, should not preclude arrangements for gifts, grants, or transfers of funds for specified national objectives. Cooperative arrangements with other Government agencies, foundations, libraries, and library associations would not only have to continue but be considerably expanded.

Today, the three national libraries have voluntarily organized themselves into a consortium to coordinate their automation efforts and to make their systems compatible on the national level. They are also cooperating on the national Serials Data Program, among others. The major objective is the creation in LC of a computer-controlled data bank to serve the entire nation.

For the future, similar consortia can be envisaged. Libraries cannot forever stay out of the business of collecting and servicing informational materials limited to data. There are at present several Government agencies

concerned with the collection, processing (as machine records), and servicing of data, and the Library of Congress should be tied to them in a more or less formal relationship. An initial consortium for the acquisition and processing of data records might consist, for example, of the Library, the Smithsonian Institution, the National Bureau of Standards, and the Environmental Science Services Administration. NBS operates the National Standard Reference Data Center, ESSA has the National Oceanographic Data Center, and SI operates the Astrophysical Observatory. But data do not exist alone in the form of such formal collections, reduced to computer stores. They are also produced in ordinary print and near-print form. LC's Photoduplication Service, for example, accepts for retention and for servicing by photocopying accumulations of data which individual scientists have compiled in a form too voluminous or otherwise unsuitable for publication in the normal scientific literature.

Similar consortia would need to be formed in fields other than science and technology, for example, in the arts, the humanities, and in the social sciences. There are already in existence or evolving consortia among libraries for one purpose or another. University libraries--at present, Chicago, Stanford, and Columbia--have formed relations that may contribute to the development of the national library and information system. While these are "operational" groupings, there are other possible forms of association for still other purposes. A number of organizations are devoted to library research. Where once there was only the Council on Library Resources, there is now the Institute for Library Research, and other emerging activities. In its own research work, the Library of Congress as the National Library would assuredly need more or

less formal association with these organizations and even closer relations than it now has, and they are already multitudinous, with the research-oriented committees of the major library associations--the American Library Association, the Association of Research Libraries, the Special Libraries Association, the American Documentation Institute, and others.

If the Library of Congress is to be the kind of national library outlined in this paper, there must be a high degree of coordination of activities with libraries and other information centers. It goes without saying that they will also have to be adequately funded and staffed if a truly national network of library and information centers is to emerge during the remainder of this century. The quality and quantity of professional staff will have to be greatly augmented and a Permanent National Commission on Libraries and Information will be needed to help provide the influence and inspiration that will be needed. Time, too, is an important element. Obviously, not all of the foregoing services could be inaugurated immediately, nor could they be operational overnight. The Library of Congress, however, recognizing its limitations but attempting honestly to assess its potentialities, believes that with widespread support, adequate funds, and the talented staff it has always been able to attract, it can provide the leadership expected by the library and information scientists in the national effort to control and disseminate information.